

AMENDMENTS TO THE CLAIMS

Please replace the claims, including all prior versions, with the listing of claims below.

1. (Currently Amended) A device for determining the quality of fuel for an internal combustion engine, ~~having~~ comprising:

a pressure sensor (1) for measuring the pressure (p) in a fuel container;

and

a temperature sensor (4) for measuring the temperature (T) in a fuel container; and
an evaluation unit (5) with inputs that are connected to the pressure sensor (1) and the temperature sensor (4), for determining a quality value (Q) representing the fuel quality, ~~characterized in that~~
wherein the evaluation unit (5) determines the quality value (Q) as a function of the temperature (T) and the pressure (p) in the fuel container in that the evaluation unit (5), derives the quality value (Q) therefrom.

2. (Currently Amended) The device as claimed in claim 1, ~~characterized in that~~
wherein the evaluation unit (5) comprises a first processing unit (6-9) which has inputs that are connected to the pressure sensor (1) and the temperature sensor (4) and which determines, as a function of the pressure (p) and temperature (T) in the fuel container, a gas emission characteristic value (T_{TH}) representing the gas emission behavior of the fuel, and

the evaluation unit (5) comprises a second processing unit (10) which has an input that is connected to the first processing unit (6-9) and which determines the quality value (Q) of the fuel as a function of the gas emission characteristic value (T_{TH}).

3. (Currently Amended) The device as claimed in claim 2, ~~characterized in that~~ wherein the first processing unit (6-9) comprises a differentiator (6) which determines the rate of change in the pressure (p) in the fuel container.

4. (Currently Amended) The device as claimed in claim 3, ~~characterized in that~~ wherein the first processing unit (~~6-9~~) comprises a comparator unit (~~8~~) which has inputs that are connected to the differentiator (~~6~~) and which compares the rate of change in pressure in the fuel container with a preset threshold value.

5. (Currently Amended) The device as claimed in claim 4, ~~characterized in that~~ wherein the evaluation unit (~~5~~) comprises a sample-and-hold device (~~9~~) having a sampling input and a control input, the sampling input being connected to the temperature sensor (~~4~~), while the control input is connected to the comparator unit (~~8~~).

6. (Currently Amended) A method for determining the quality of fuel for an internal combustion engine, comprising ~~the following steps~~:

- ~~M~~measuring pressure (~~p~~) and/or temperature (~~T~~) in a fuel container, while the fuel is in a fuel container; and
- ~~D~~determining a quality value (~~Q~~) representing the fuel quality, ~~characterized in that~~ wherein the quality value (~~Q~~) is determined as a function of the measured temperature (~~T~~) and the measured pressure (~~p~~) in the fuel container in that the quality value (~~Q~~) is derived therefrom.

7. (Currently Amended) The method as claimed in claim 6, further comprising ~~the following steps~~:

- ~~D~~determining a gas emission characteristic value (~~T_{TH}~~), representing the gas emission behavior of the fuel as a function of the temperature (~~T~~) and the pressure (~~p~~) in the fuel container; and
- ~~D~~determining the quality value (~~Q~~) of the fuel as a function of the gas emission characteristic value (~~T_{TH}~~) determined for the fuel.

8. (Currently Amended) The method as claimed in claim 7, further comprising ~~the following steps~~:

- ~~D~~etermining the rate of change in pressure ($\frac{dp}{dt}$) in the fuel container; and
- ~~D~~etermining the gas emission characteristic value (T_{TH}) as a function of the rate of change in pressure ($\frac{dp}{dt}$) in the fuel container.

9. (Currently Amended) The method as claimed in claim 8, further comprising the following steps:

- ~~C~~omparison of the rate of change in pressure ($\frac{dp}{dt}$) in the fuel container with a preset threshold value ($\frac{dp}{dt}_{MIN}$); and
- ~~D~~etermining the gas emission characteristic value (T_{TH}) as the temperature in the fuel container at which the preset threshold value ($\frac{dp}{dt}_{MIN}$) for the change in pressure is reached or exceeded.

10. (Currently Amended) The method as claimed in ~~at least one of claims 6 to 9~~ claim 6, ~~characterized in that~~ wherein the fuel container is closed off during the measurement of the pressure and the temperature.

11. (Currently Amended) The method as claimed in claim 10, ~~characterized in that~~ wherein the fuel container has tank ventilation that is shut off during measurement of the pressure (p) in the fuel container.

12. (Currently Amended) The method as claimed in ~~at least one of claims 6 to 11~~ claim 6, ~~characterized in that~~ wherein the internal combustion engine is switched off during measurement of the pressure (p) in the fuel container.

13. (Currently Amended) The method as claimed in ~~at least one of claims 6 to 12~~ claim 6, ~~characterized in that~~ wherein the fuel is injected into a combustion chamber of an internal combustion engine as a function of the quality value.